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AIR FORCE TO 13C7-1-11
MARINE CORPS FMFM 7-47

MCRP 4-11.3C (formerly

AIRDROP OF SUPPLIES AND EQUIPMENT
RIGGING CONTAINERS

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HEADQUARTERS
DEPARTMENTS OF THE ARMY AND THE AIR FORCE
THE US MARINE CORPS

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HEADQUARTERS
DEPARTMENT OF THE ARMY
UNITED STATES MARINE CORPS
DEPARTMENT OF THE AIR FORCE
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AIRDROP OF SUPPLIES AND EQUIPMENT: RIGGING CONTAINERS

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PREFACE

PURPOSE

This manual gives the latest approved doctrine for rigging airdrop containers. It is written for use by a parachute rigger or jumpmaster. It consists of five parts.

- Part One contains general information for containers and aircraft.
- Part Two contains procedures for rigging A-7A container loads.
- Part Three contains procedures for rigging A-21 container loads.
- Part Four contains procedures for rigging A-22 container loads.
- Part Five contains procedures for rigging specialized loads and equipment.

NOTICE OF EXCEPTION

When an item of airdrop equipment is replaced or a rigging procedure is changed, it will be impossible to change all manuals in the field at one time. Therefore, FM 10-500-3/TO 13C7-1-11/FMFM 7-47 will be changed, when necessary, and will take precedence over the procedures in an individual rigging manual. There may be times, however, when the procedures in an individual rigging manual must be followed even though they are different from those in this manual. When this occurs, a notice of exception will be printed at the beginning of each paragraph where the exception is authorized. The notice of exception will look like the following:

> **NOTICE OF EXCEPTION**
> The procedures in this paragraph are different from those in FM 10-500-3/TO 13C7-1-11/ FMFM 7-47. An exception to FM 10-500-3/TO 13C7-1-11/FMFM 7-47 is granted. The procedures in this paragraph must be followed.

Manuals which have currently been granted exceptions are FM 10-550/TO 13C7-22-71 and FM 10-500-53/TO 13C7-18-41/MCRP 4-3.8.

REFERENCE INFORMATION

To avoid repeating certain information and procedures, it is often necessary to reference other FMs and TMs.
For example, this manual often references FM 10-500-2/TO 13C7-1-5. This may seem to be contradictory in that this manual, FM 10-500-3/TO 13C7-1-11/FMFM 7-47, deals with rigging container loads and FM 10-500-2/TO 13C7-1-5 deals with rigging platform loads. However, FM 10-500-2/TO 13C7-1-5 also provides general information and general procedures. Where information is the same or only minor differences exist, it is permissible to state that the information is provided in FM 10-500-2/TO 13C7-1-5. Where procedures are the same or only minor differences exist, it is permissible to state that the procedure is done according to or by adapting the procedures in FM 10-500-2/TO 13C7-1-5.

USER INFORMATION

The proponent of this publication is HQ TRADOC. You are encouraged to report any errors or omissions and suggest ways for making this a better manual. Army personnel, send your comments on DA Form 2028 directly to:

Airborne and Field Services Department
USA Quartermaster Center and School
1010 Shop Road
Fort Lee, VA 23801-1502

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3300 Russell Road, Suite 318A
Quantico, VA 22134-5021

PART ONE
GENERAL INFORMATION

CHAPTER 1
GENERAL RIGGING INFORMATION FOR CONTAINER LOADS

Section I
RIGGING INFORMATION

1-1. Description of Container Loads

Container loads are loads that are rigged for airdrop in airdrop containers such as the A-7A airdrop cargo sling assembly, the A-21 cargo bag assembly, the A-22 cargo bag assembly, and the A-23 cargo bag assembly. These containers are packed with supplies, disassembled equipment, or small items of ready-to-use equipment prepared for airdrop. Loads may be required to be cushioned with honeycomb, felt, or cellulose wadding depending on the load requirements and the method of airdrop. The number and types of parachutes required to stabilize the load and slow its descent depend on the type of container used, the weight of the load, and the type of airdrop.

a. A-7A Airdrop Cargo Sling Assembly. The A-7A airdrop cargo sling assembly consists of four identical sling straps. The length of each strap is 188 inches. Each sling strap is fitted with a parachute harness adapter (commonly called a friction adapter) and a floating D-ring. Loads weighing up to 500 pounds may be airdropped with an A-7A airdrop cargo sling assembly. Each A-7A cargo sling strap weighs 1 1/2 pounds. Part Two of this manual covers rigging the A-7A container for airdrop.

b. A-21 Cargo Bag Assembly. The A-21 cargo bag assembly is an adjustable container. It consists of a sling assembly with scuff pad, fixed quick-release strap and assembly, two O-ring straps, three quick-release straps, and a 97- by 115-inch canvas cover. The A-21 cargo bag assembly has a 500-pound load capacity. Part Three of this manual covers rigging an A-21 container for airdrop.

c. A-22 Cargo Bag Assembly. The A-22 cargo bag assembly is an adjustable cotton duck cloth/nylon and nylon webbing container. It consists of a sling assembly, a cover, and four suspension webs. The container weight is about 41 pounds. The load may be rigged with or without a cover. The weight capacity for the container is 501 to 2,200 pounds without the weight of the parachute. The height will vary, but will not exceed 83 inches with parachute unless specific rigging procedure authorizes it. Part Four of this manual covers rigging the A-22 container.

d. Stretch A-22 Cargo Bag. The stretch A-22 cargo bag consists of two A-22 cargo bag assemblies. The covers may or may not be used. Only six of the suspension webs are used. Nylon and cotton sling assemblies must not be mixed. The weight capacity of the load is 900 to 2,200 pounds without the weight of the parachute. Part Four of this manual covers rigging the stretch A-22 container.

e. Double A-22 Cargo Bag. The double A-22 cargo bag consists of two A-22 cargo bag assemblies. The covers may or may not be used. Only six of the suspension webs are used. Nylon and cotton sling assemblies must not be mixed. The weight capacity of the load is 900 to 2,200 pounds without the weight of the parachute. Part Four of this manual covers rigging the double A-22 container.

f. A-23 Cargo Bag. The A-23 sling assembly is similar to the A-22 sling assembly, but it has additional support webs on all four sides with an additional D-ring on each side. The weight capacity of the load is 501 to 2,200 pounds without the weight of the parachute. The A-23 container assembly is used for HAARS drops, but may be used for A-22 drops. Part Five of this manual covers rigging the A-23 container.

1-2. Types of Airdrop

The three types of airdrop by which container loads can be delivered are low-velocity airdrop, high-velocity airdrop, and free drop. These are described below.

a. Low-Velocity Airdrop. Low-velocity airdrop is the delivery of supplies and equipment from an aircraft in flight using cargo parachutes. The items are usually rigged with honeycomb under them. The cargo parachutes are attached to the top of the load. The parachutes slow the descent of the load and ensure minimum shock when the load hits the ground.

b. High-Velocity Airdrop. High-velocity airdrop is the delivery of supplies and equipment from an aircraft in flight using a stabilizing parachute. The items are rigged with honeycomb under them. The stabilizing parachute is attached to the top of the load to maintain it in an upright position.

c. Free Drop. Free drop is the delivery of certain nonfragile items of supply from an aircraft in flight without the use of the parachutes or other retarding devices. No specific instructions are given in this manual for this type of airdrop.

1-3. Commonly Used Items

Items commonly used for rigging container loads are described below. An equipment required table is included for each load in this manual as a part of the section describing that load. This table lists the items and quantity of each item needed to prepare and rig the load covered in that section. Standard airdrop hardware, straps, and canvas items are described in FM 10-500-2/TO 13C7-1-5. Canvas, metal, webbing, and wood items are inspected according to TM 10-1670-298-20&P. Strength ratings for the items in this section and for other airdrop items are listed in FM 10-516/TO 13C7-1-13. Some textile, wood, and miscellaneous items are described below. The proper use of these items will be covered in this manual or in other manuals of the FM 10-500/TO 13C7 series.

a. Textile Items. Textile items which may be used when a container load is being rigged are described below.

> NOTE: Lengths will vary. Lengths specified are only typical and may be changed.

(1) Type III nylon cord is used to make safety ties and to hold items in place. It has a tensile strength of 550 pounds.

(2) One-half-inch (or 5/8-inch) tubular nylon webbing is used as a primary skid board tie. It is also used to secure items during a drop. It has a tensile strength of 1,000 pounds.

> NOTE: When the 1/2-inch (or 5/8-inch) tubular nylon webbing is not available for the skid board tie, type IV (coreless) braided nylon cord can be used. When the type IV (coreless) braided nylon cord is not available, double length of type III nylon cord can be used.

(3) Type I, 1/4-inch cotton webbing is used to make many of the needed safety ties. It has a tensile strength of 80 pounds.

(4) Ticket number 8/4 and 8/7 cotton thread are used to make various ties.

b. Wood Items. Wood items used on container loads, with the exception of the A-22 skid, are made locally using details found in the rigging manual for the particular load. The 48- by 48-inch skid for the A-22 cargo bag may be ordered precut or prepared locally. When the skid is prepared locally, AC grade plywood must be used.

c. Miscellaneous Items. Miscellaneous items which may be used when a container load is being rigged are described below.

(1) Two-inch masking tape is used to secure the folds of excess webbing, to prevent honeycomb from being cut by type III nylon cord, and to hold padding in place.

(2) Cellulose wadding and felt sheets may be used to pad fragile items, to prevent sharp edges from cutting, and to protect slings during deployment.

(3) Honeycomb is used to spread the landing shock. Honeycomb is also used to fill empty spaces and to level and pad the load. The number of layers used depends on the item being airdropped and the method of airdrop. Honeycomb is issued in 3- by 36- by 96-inch sheets.

(4) Steel strapping may be used for rigging airdrop items. The standard strapping used is 1/50 inch thick and 5/8 inch wide with a breaking strength of 1,000 pounds. It can be used to bind items together or form containers on A-7A and A-21 loads. When strapping is used to form containers, it will be doubled and the maximum weight of the load will not exceed 250 pounds without parachute weight. When strapping is used on A-22 or A-23 loads, it will not be bound around the skid board unless specific rigging procedures authorize it.